Claims

1. Method for decoding compressed video pictures in a video decoding device comprising a random access source of coded video pictures, a video decoder and a plurality of reconstruction buffers for storing decoded pictures, said method comprising the steps of:

establishing an order of decoding pictures;

commanding said video decoder to decode a picture upon availability of a reconstruction buffer.

2. Method according to claim 1, comprising the steps of:

locking access to a reconstruction buffer containing a picture to be displayed until display of said picture:

commanding the decoding of a further picture upon availability of an unlocked reconstruction buffer.

3. Method according to claim 2, wherein said step of establishing an order for decoding pictures comprises the steps of:

determining a list of pictures to be displayed among pictures in said stream;

recursively determining chains of predictors for said pictures to be displayed, and inserting said predictors in said list of pictures to be displayed in the order required for decoding predictors before pictures depending on said predictors.

4. Method according to claim 3, wherein said compressed video stream comprises pictures in the order of decoding, further comprising the steps of determining for a bidirectional picture a nearest and a farthest predictor, where said nearest predictor is the picture appearing in the stream closest to said bi-directional picture, said farthest predictor being decoded prior to said nearest predictor.

5. Method according to claim 4, wherein said step of determining an order of decoding pictures comprises the steps of.

loading predetermined information descriptive of the contents of the video stream, and

deriving said order of decoding pictures from said information as a function of a selected display mode.

6. Method according to claim 5, further comprising the step of selecting a reconstruction buffer among available reconstruction buffers for storage of a decoded picture, said selection being carried out so as to select the available reconstruction buffer in which no decoded picture to be displayed has been stored for the longest time.

7. Method according to claim 6, further comprising the step of attributing a counter to each reconstruction buffer, of incrementing each counter every time a picture is displayed, of resetting a counter when a picture of its associated buffer is displayed and of attributing the buffer with the highest counter value to a picture to be decoded.

8. Method according to claim 7, carried out using only three reconstruction buffers.

9. Method according to claim 8, further comprising the steps of verifying prior to deciding the decoding of a picture, whether said picture is already present in one of the reconstruction buffers, and of avoiding a second decoding of said picture in this case.

10. Video decoding device comprising

a random access source of a compressed video stream including coded pictures;

means for selecting pictures to be decoded;

a plurality of reconstruction buffers for storing decoded pictures;

a video decoder for decoding coded pictures;

means for monitoring the availability for write access of reconstruction buffers and for controlling said video decoder to decode a selected picture upon availability of a reconstruction buffer, wherein the availability of a reconstruction buffer is determined by the status of the display of a picture contained in said reconstruction buffer.